

CLAIMS

1. An all-solid-state electrochemical generator (1) comprising a negative electrode (4) capable of delivering a lithium cation, an all-solid-state polymeric electrolyte (3) formed from a macromolecular material in which an ionized lithium salt is dissolved and a positive electrode capable of incorporating the nonionized species corresponding to said lithium cation, characterized in that the all-solid-state polymeric electrolyte comprises one or more fluoropolymers in a macromolecular material/fluoropolymer(s) mass ratio of between 6 and 700.
2. The all-solid-state electrochemical generator as claimed in claim 1, characterized in that the all-solid-state alkaline polymeric electrolyte comprises 0.1 to 10 wt% of fluoropolymer(s).
3. The all-solid-state electrochemical generator as claimed in claim 1, characterized in that the all-solid-state alkaline polymeric electrolyte comprises 0.5 to 5 wt% of fluoropolymer(s).
4. The all-solid-state electrochemical generator as claimed in one of claims 1 to 3, characterized in that the fluoropolymer is chosen from the group comprising the following polymers: PVDF, PHFP, PCTFE, PTFE, PVF₂, PVF.
5. The all-solid-state electrochemical generator as claimed in one of claims 1 to 4, characterized in that the positive electrode is made of a composite material, of the active substance, of a compound inert to electronic conduction favoring the transfer of electrical charges into a collector, such as graphite or acetylene black, and of the polymeric electrolyte.

that the macromolecular material of the all-solid-state polymeric electrolyte is a polyether based on polyethylene oxide or polypropylene oxide, or polyoxyalkylenes.

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12. The all-solid-state electrochemical generator as claimed in one of claims 1 to 11, characterized in that the negative electrode is a lithium electrode.

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13. The all-solid-state electrochemical generator as claimed in one of claims 1 to 12, characterized in that the polymeric electrolyte comprises magnesia, preferably 5 to 30 wt%, very advantageously between 8 and 25 wt%.

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14. The all-solid-state electrochemical generator as claimed in one of claims 1 to 13, characterized in that the macromolecular material of the all-solid-state polymeric electrolyte is formed by extrusion or by coextrusion with the electrode films.

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15. The all-solid-state electrochemical generator as claimed in one of claims 1 to 14, characterized in that the polymeric electrolyte comprises an antioxidant compound.

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16. The all-solid-state electrochemical generator as claimed in claim 15, characterized in that the proportion of antioxidant compound is between 0.5 and 3% with respect to the mass of polymer.

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17. The all-solid-state electrochemical generator as claimed in either of claims 15 and 16, characterized in that the oxidant is chosen from the group comprising quinone or hydroquinone derivatives and phenolic antioxidants.

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